

FIGURE 1

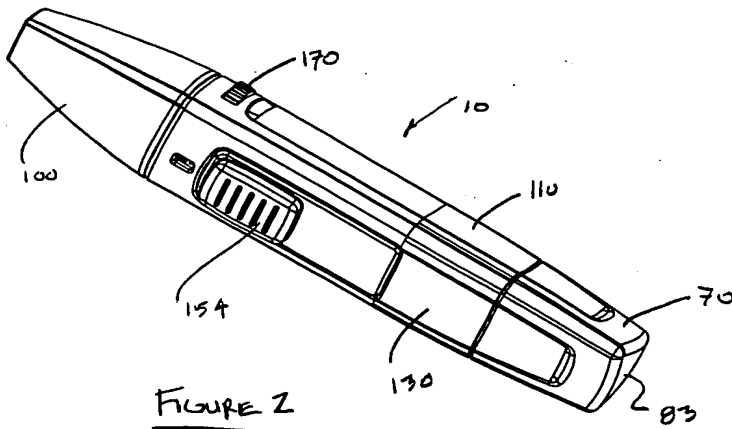


FIGURE 2

Components

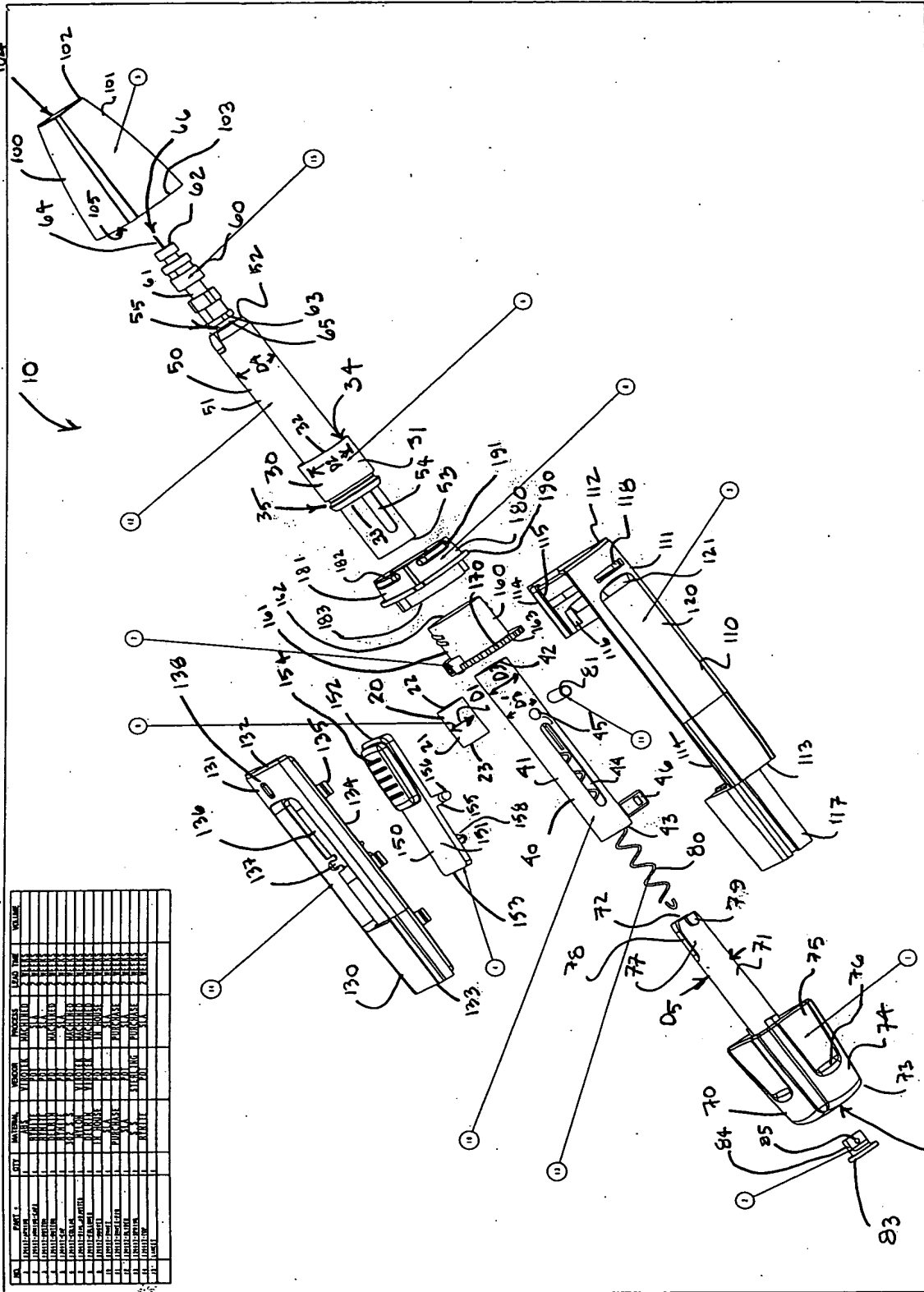


FIGURE 3

Arming the LANCET Device

THE LANCER IS CURRENTLY IN THE STEADY STATE POSITION.  
 NO ACTION IS TAKING PLACE AT THIS TIME.

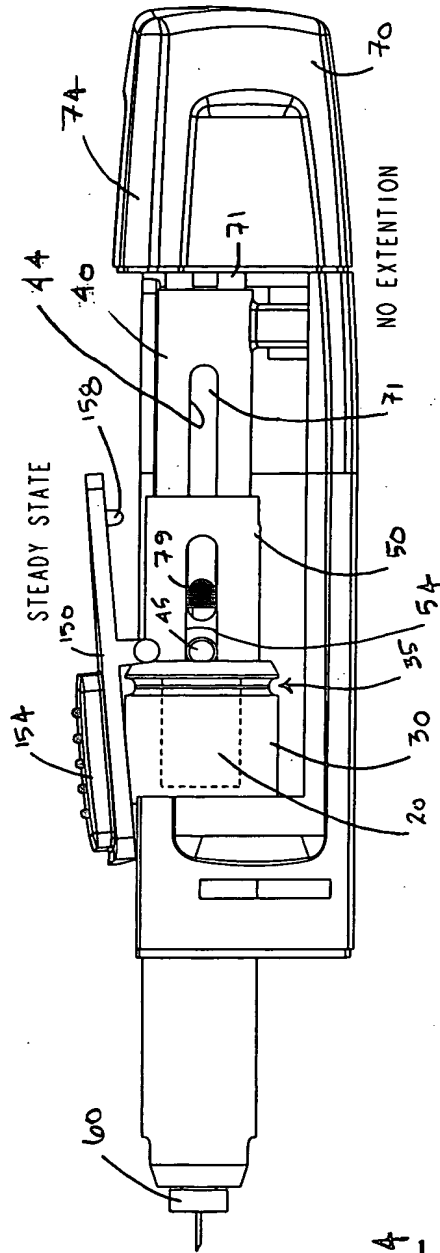


FIGURE 4

THE LANCER IS ARMED ABOUT ONE QUARTER OF THE WAY.  
 NOTICE THE POSITION OF THE ARMER (A) RELATIVE TO THE  
 HOUSING (H). ALSO NOTICE THE COLLAR (C) RELATIVE TO  
 THE MAGNET (M). THE MAGNET IS SHOWN WITH DASHED LINES.

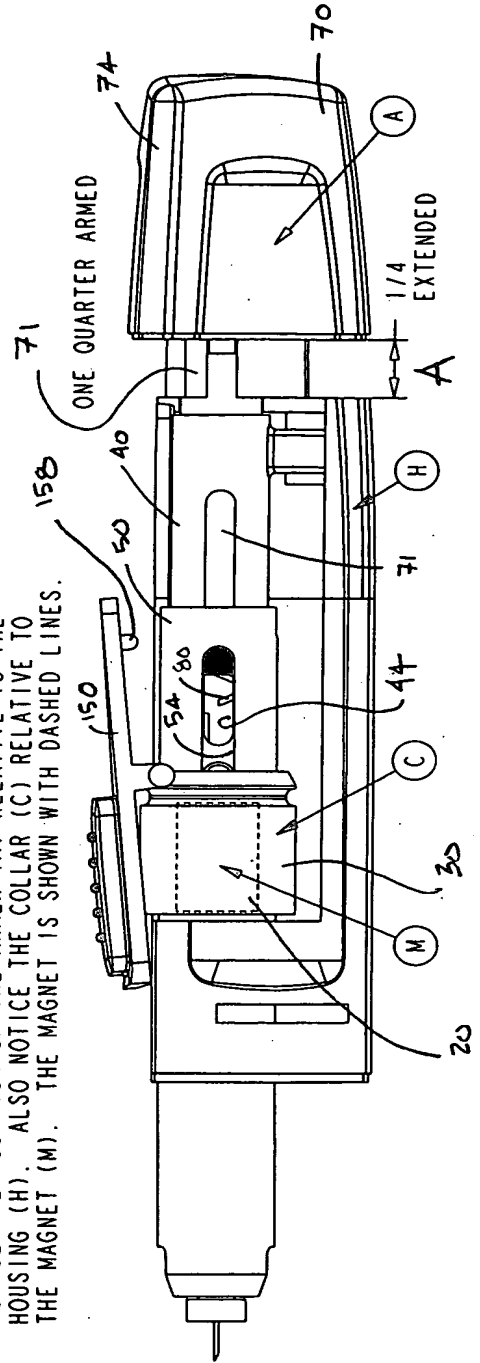


FIGURE 5

2. 3dnpv

THE LANCER IS FULLY ARMED.  
 NOTICE THE POSITION OF THE ARMER (A) RELATIVE TO THE  
 HOUSING (H). ALSO NOTICE THE COLLAR (C) RELATIVE TO  
 THE MAGNET (M). THE MAGNET IS SHOWN WITH DASHED LINES.

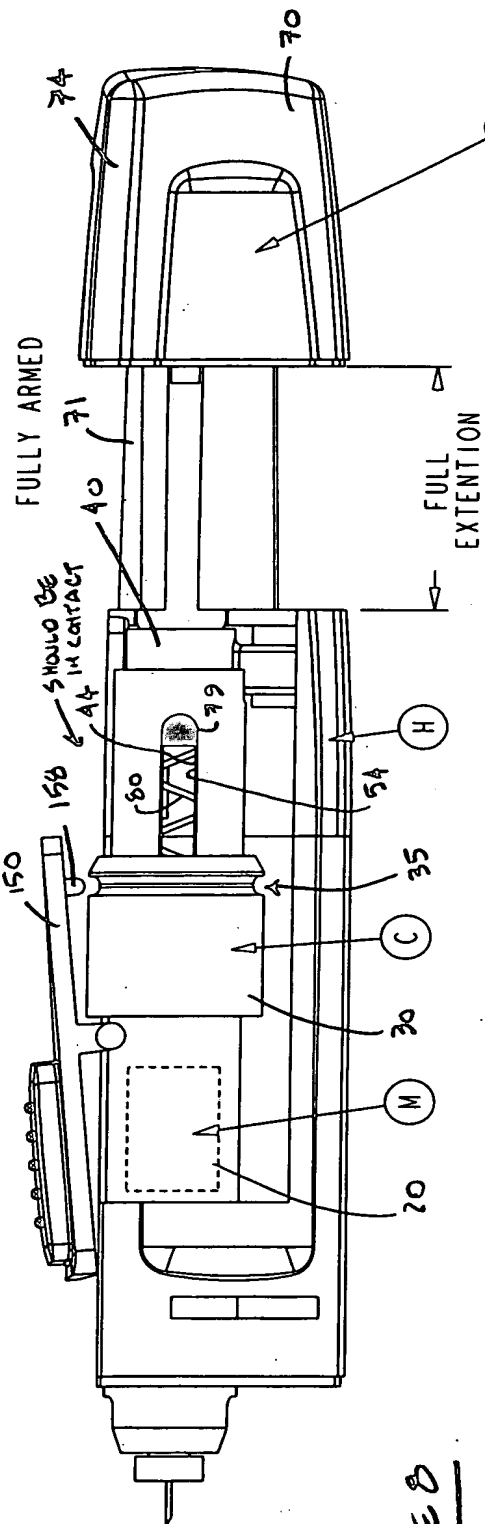


FIGURE 8

THE LANCER IS FULLY ARMED BUT THE ARMER HAS RETURNED TO  
 ITS ORIGINAL POSITION. NOTICE THE POSITION OF THE ARMER  
 (A) RELATIVE TO THE HOUSING (H). ALSO NOTICE THE COLLAR (C)  
 RELATIVE TO THE MAGNET (M). THE MAGNET IS SHOWN WITH DASHED LINES.

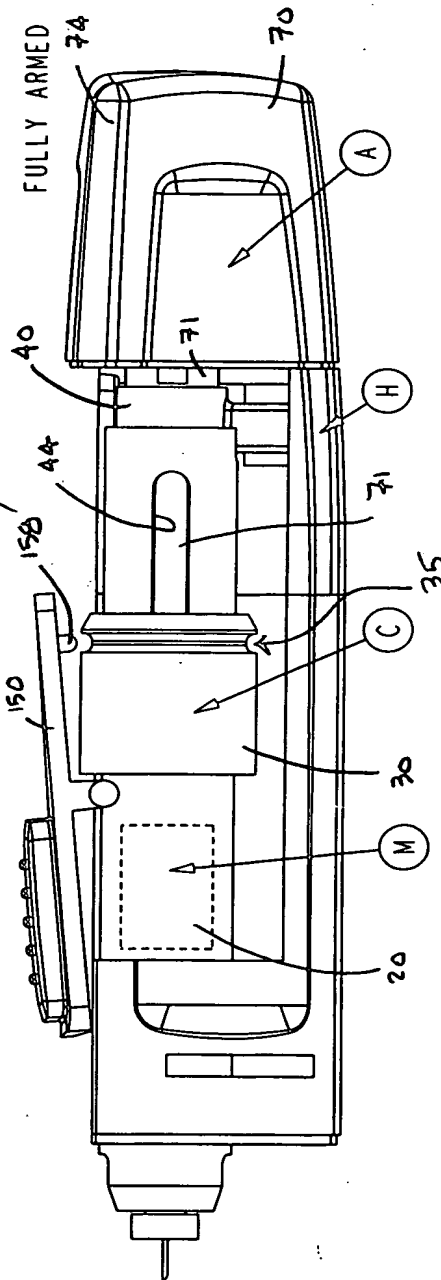


FIGURE 9

# ADJUSTING THE PIERCING POSITION OF THE LANCET

THE DIAL ADJUSTER (D) CONTROLS THE HEIGHT OF THE CAP FOLLOWER (CF) AND CAP (DASHED LINES). THERE ARE 5 SETTINGS; 5 ALLOWS FOR THE DEEPEST PUNCTURE, WHILE 1 HAS THE MOST SHALLOW PUNCTURE. AS THE DIAL ADJUSTER IS ROTATED FROM LEFT TO RIGHT ALONG ITS SCREW THREAD THE (CF) AND CAP TRANSLATES UP AND DOWN ACCORDING TO WHICH SETTING IS CHOSEN (RELATIVE TO HOUSING (H)). NOTICE THE INCREASE IN THE GAP AS SHOWN IN ALL FIVE VIEWS. (D) IS FIXED IN TRANSLATION RELATIVE TO HOUSING (H) AND IS ONLY ALLOWED TO ROTATE.

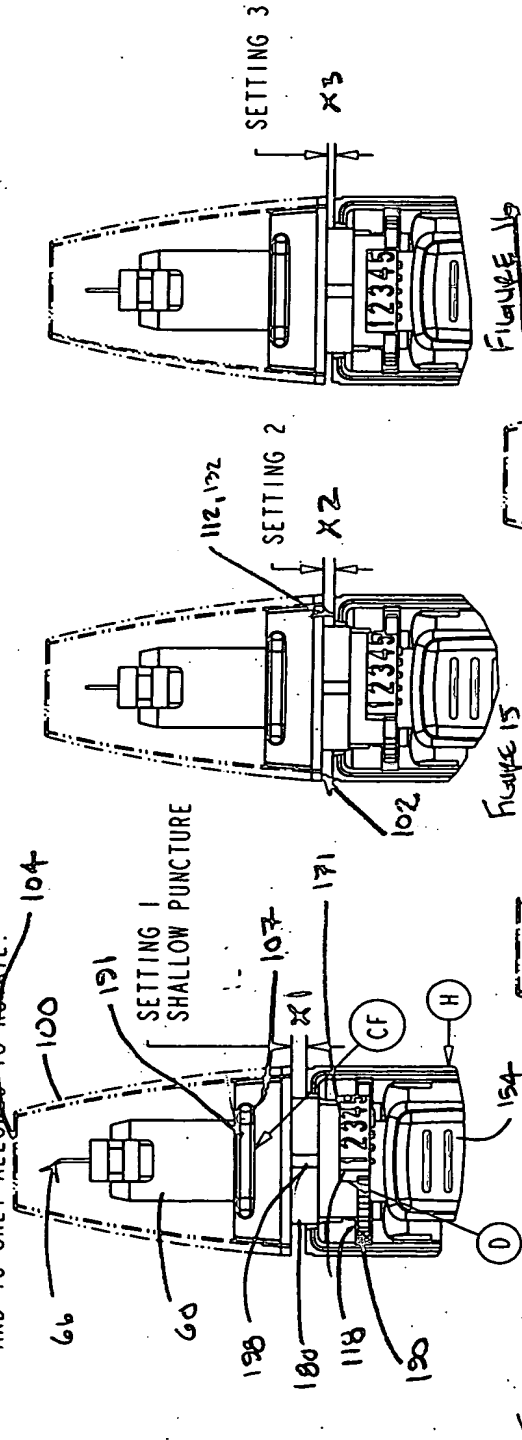


FIGURE 14

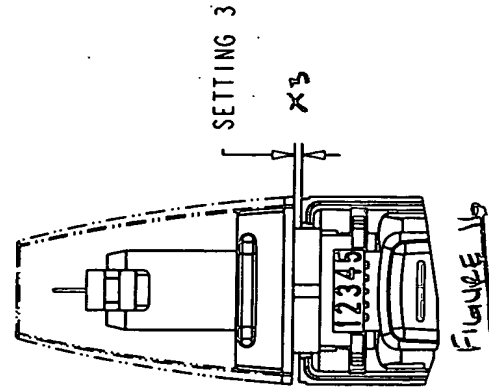


FIGURE 15

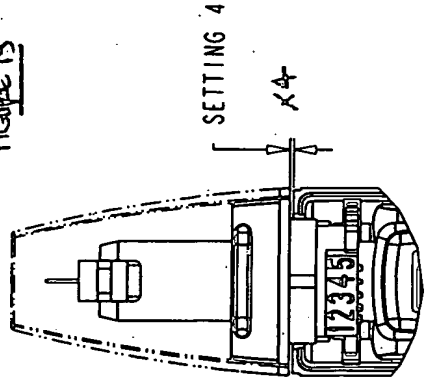


FIGURE 17

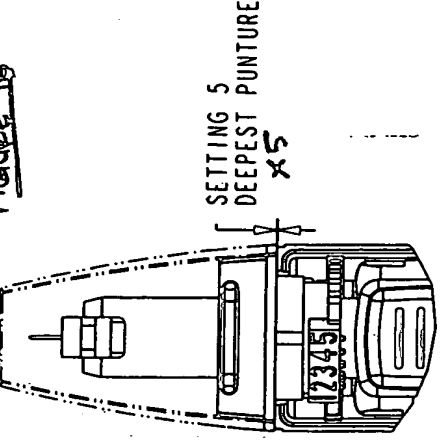


FIGURE 18

CAP FOLLOWER (CF) TRANSLATES RELATIVE TO DIAL (D) VIA A SCREW THREAD TYPE INTERFACE. (CF) ALSO GUIDES SLIDER (S) AND THUS LANCET (L) IN A FULL 360 DEGREE MANNER THAT MINIMIZES LANCET OSCILLATION AND PAIN AT PUNCTURE.

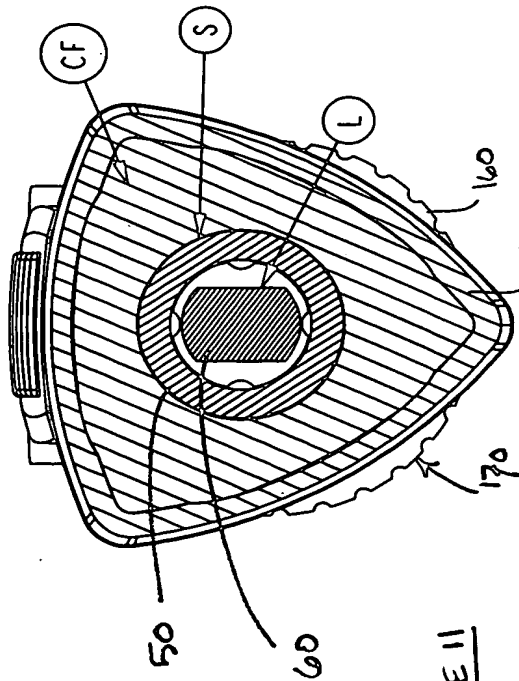


FIGURE 11

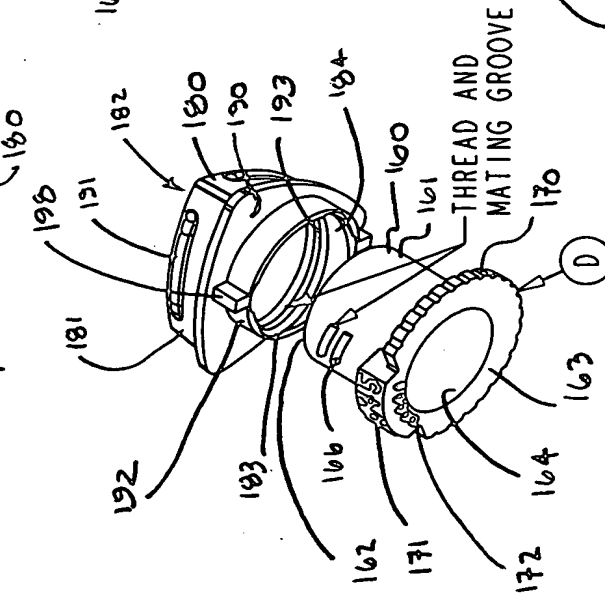


FIGURE 10

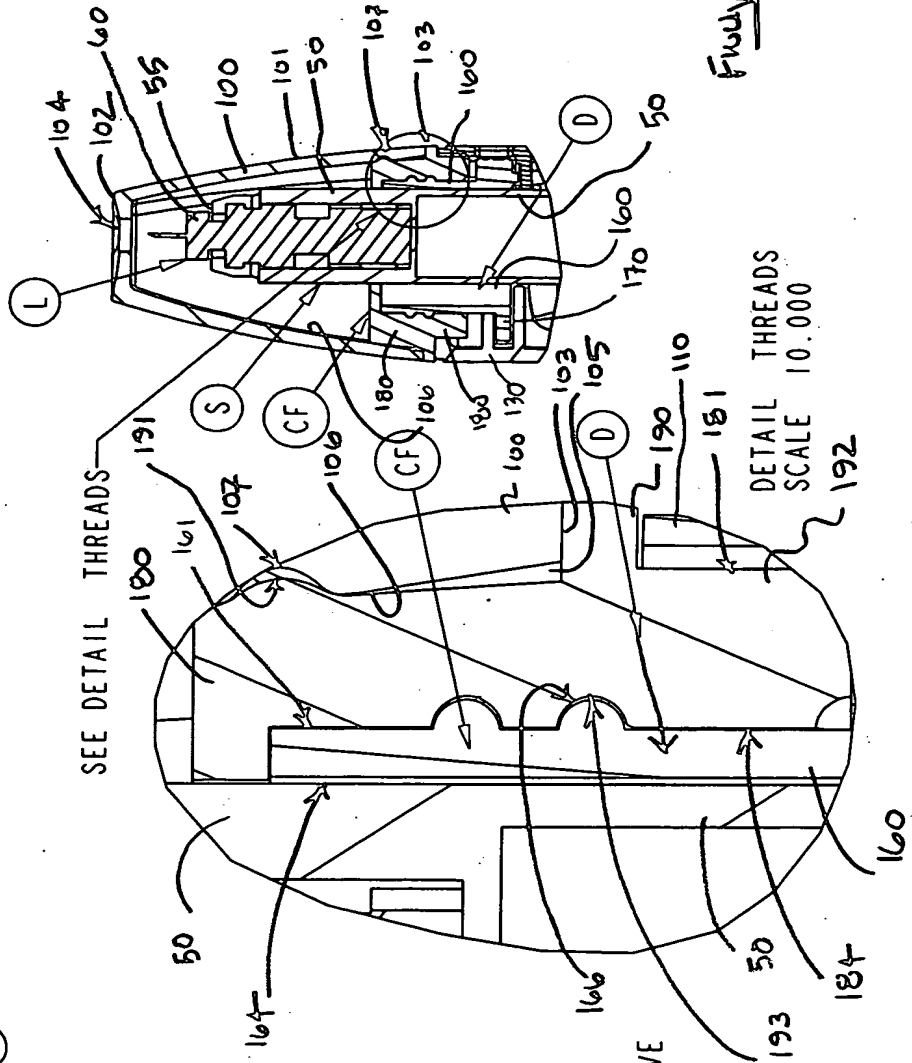


FIGURE 13

FIGURE 12

DETAIL THREADS  
 SCALE 10.000

OPERATION OF THE LANCET DEVICE

THE LANCER HAS JUST BEEN ACTIVATED. THE LANCET (L) HAS NOT YET MOVED. MAGNET (M) IS FIXED RELATIVE TO TUBE (T) AND IS APPLYING A PURE MAGNETIC ATTRACTIVE FORCE TO STEEL COLLAR (C) THAT IS 360 DEGREE UNIFORM TO THE ENTIRE PERIMETER OF (C) WHICH REDUCES OSCILLATION OF LANCET (L) AND OVERALL PAIN AT PUNCTURE. (C) IS FIXED RELATIVE TO SLIDER (S). BUTTON (B) RETAINS (C) IN ARMED POSITION UNTIL (B) IS PRESSED.

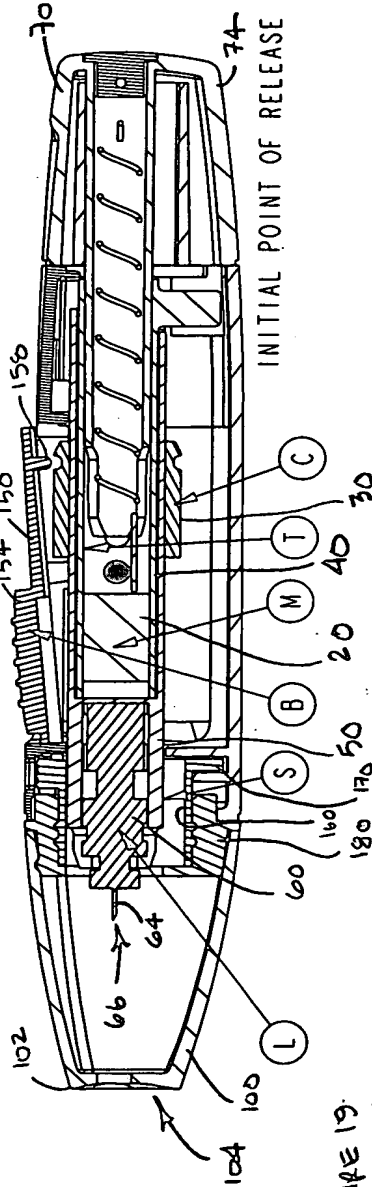


Figure 19

THE LANCER IS IN AN INTERMEDIARY POINT OF ACTION. MAGNET (M) CONTINUES TO APPLY A UNIFORM 360 DEGREE ATTRACTIVE FORCE TO COLLAR (C) WHICH MINIMIZES LANCET (L) OSCILLATION AND PAIN AT LATER PUNCTURE.

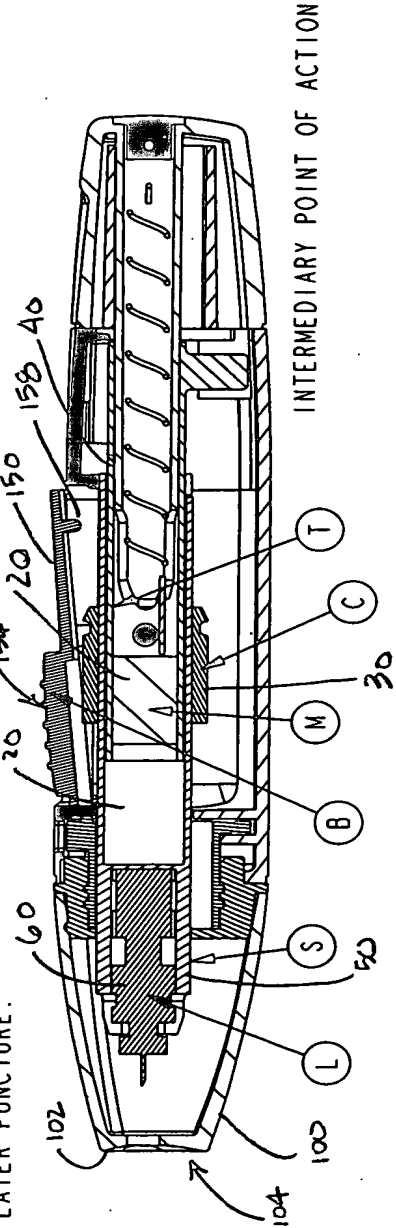


Figure 20



THE LANCET IS STILL IN FORWARD TRAVEL. THE LANCET (L) HAS JUST BROKEN THE OUTER PLANE OF THE CAP AND IS AT ITS INITIAL PUNCTURE STATE OF THE USER. MAGNET (M) IS NOW APPLYING A RETRACTIVE FORCE TO COLLAR (C). (C) CONTINUES TO TRAVEL FORWARD CARRIED BY ITS OWN MOMENTUM. AS BEFORE MAGNET IS APPLYING A UNIFORM 360 DEGREE FORCE TO COLLAR (C) WHICH MINIMIZES OSCILLATION OF (L) AND REDUCES OVERALL PAIN AT PUNCTURE OF SKIN.

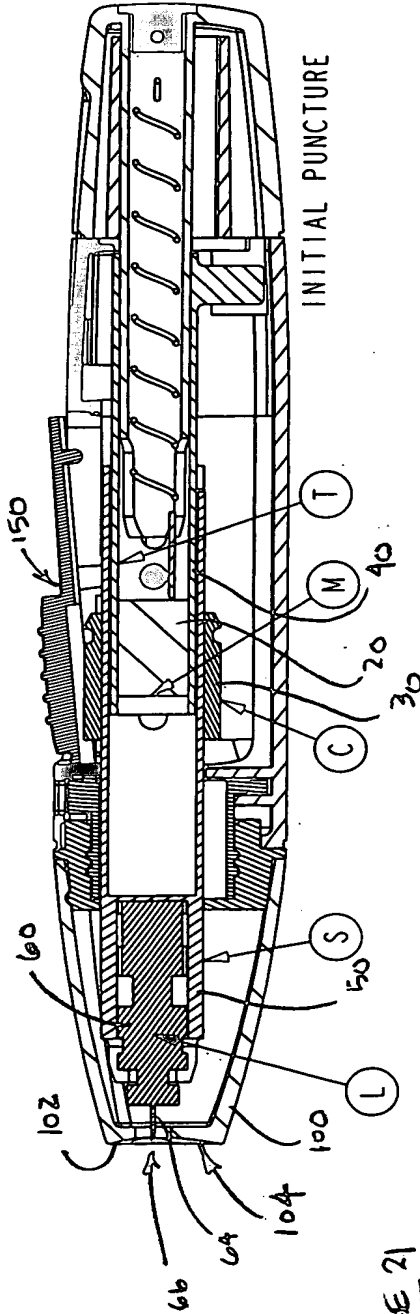


FIGURE 21

THE LANCET IS AT ITS FULLY HYPER EXTENDED STATE. THE LANCET (L) HAS TRAVELED AS FAR AS IT WILL AND HAS FULLY PUNCTURED THE USER. MAGNET (M) IS CONTINUING TO APPLY A RETRACTIVE FORCE ON COLLAR (C) THAT IS NOW PULLING (C) AND THUS (S) AND (L) BACK INWARD.

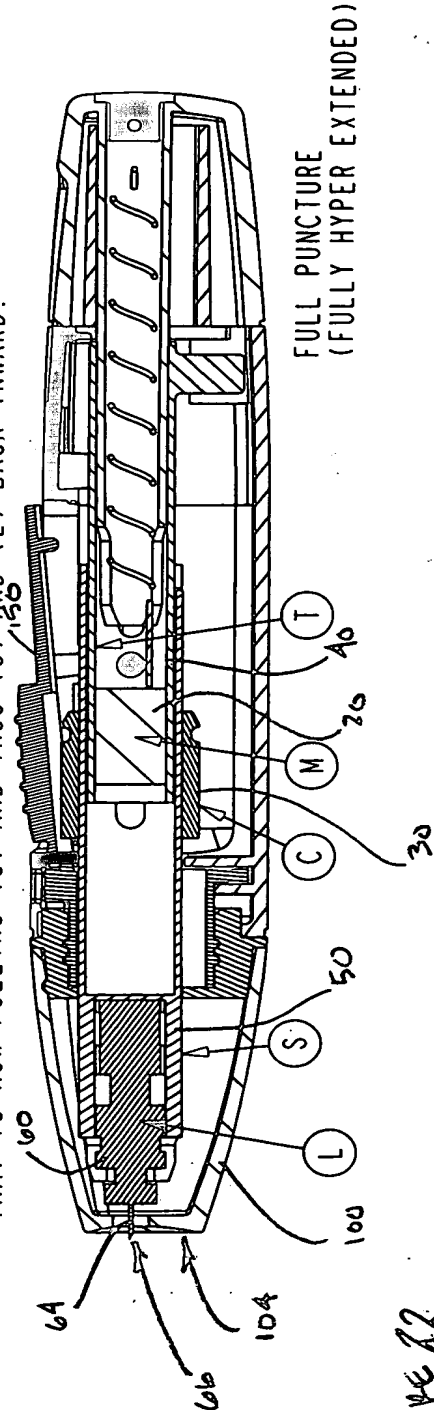


FIGURE 22

THE LANCER IS NOW RETRACTING TOWARDS STEADY STATE.  
 THE LANCET (L) IS AT AN ARBITRARY RETURN POINT IN TRAVEL  
 WITH THE MAGNET (M) CONTINUING TO APPLY AN ATTRACTIVE  
 FORCE TO COLLAR (C) CAUSING IT TO RETURN BACK TOWARDS THE  
 CENTER OF MAGNET (M) ALSO KNOWN AS "STEADY STATE".

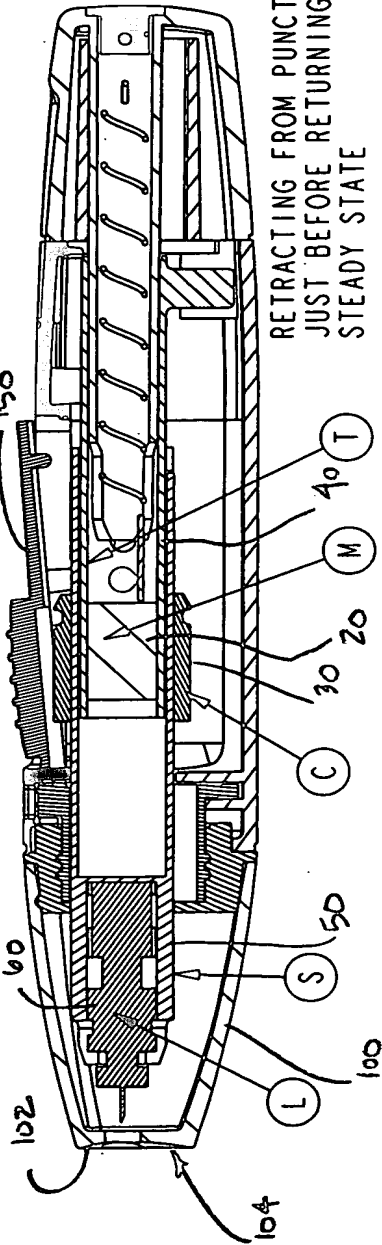


FIGURE 23

THE LANCER HAS RETURNED TO THE STEADY STATE POSITION.  
 NO MOTION ACTION IS TAKING PLACE AT THIS TIME.  
 MAGNET (M) IS MAGNETICALLY CENTERED WITHIN COLLAR (C)  
 AND ALL ATTRACTIVE AND RETRACTIVE FORCES ARE CANCELLED.  
 ADDITIONALLY ALL MAGNETIC FLUX (LINES OF FORCE) ARE  
 CONTAINED BY STEEL COLLAR (C) CAUSING A SELF MAGNETIC  
 SHIELDING SITUATION.

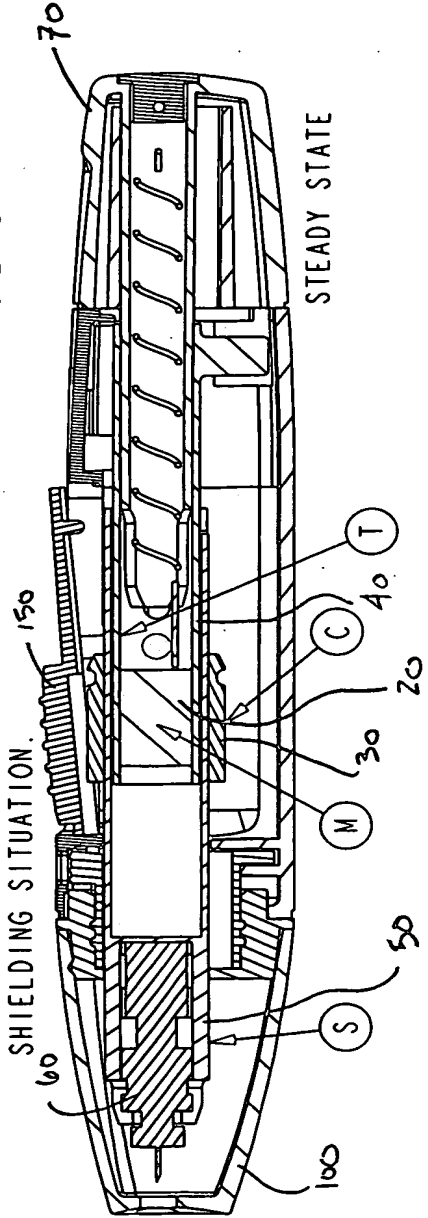


FIGURE 24

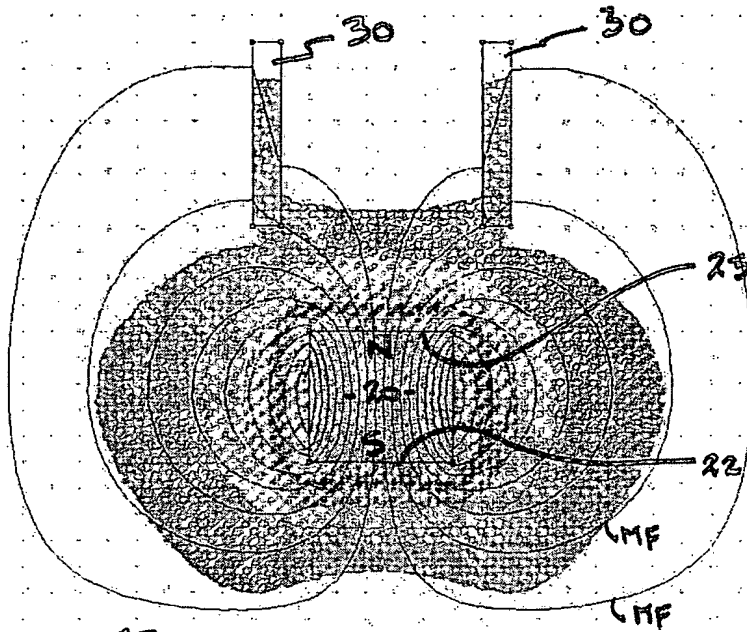


FIGURE 25

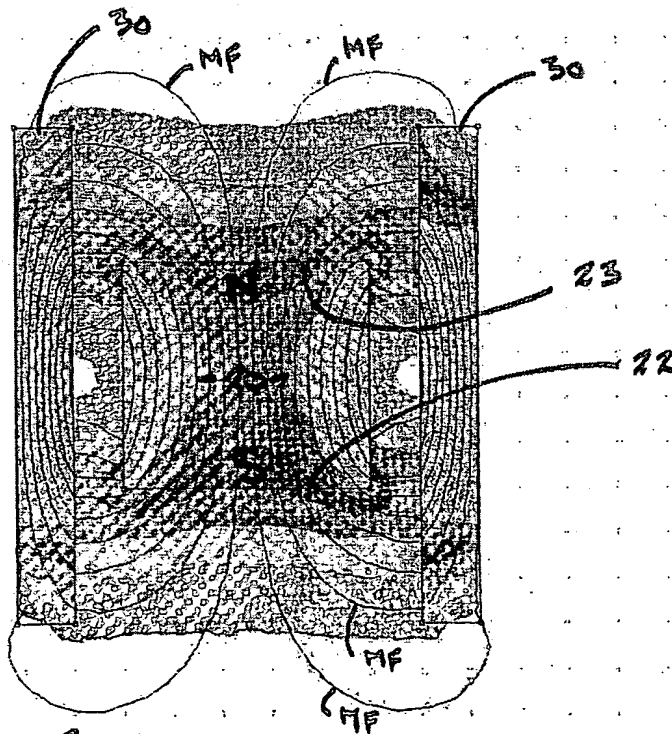
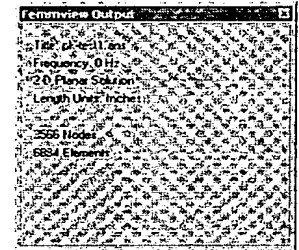
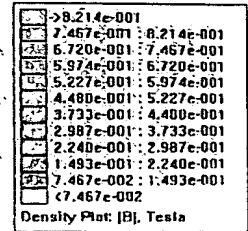
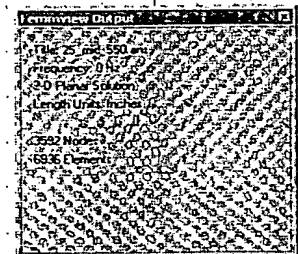
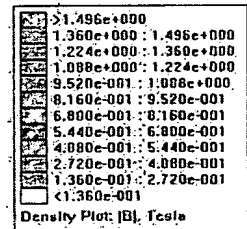


FIGURE 26



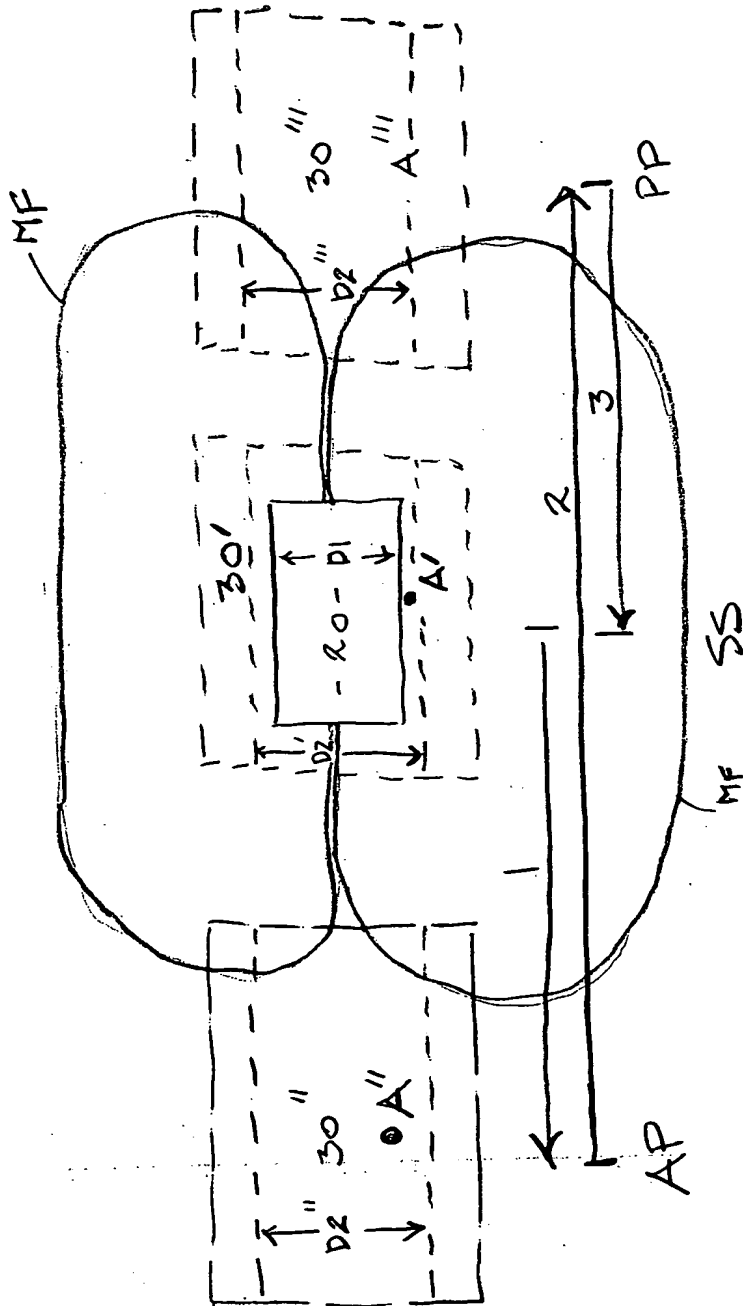


FIGURE 27